Motorcycle Manual

New Jersey Department of Transportation
Motor Vehicle Services
www.state.nj.us/mvs

Motorcycle Manual

A supplement to the **NJ Driver Manual**

Christine Todd Whitman, Governor
James Weinstein, Commissioner
Albert B. Ari, Acting Director

October 2000

New Jersey Department of Transportation
Motor Vehicle Services

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Director's message

Motor Vehicle Services works hard to keep its services and customer relations operations more efficient, convenient and responsive to New Jersey motorists. We want to ensure that every motorist gets quick, courteous and professional service when dealing with us.

In light of that, we hope this manual will assist you in qualifying for a motorcycle license, as well as help you to safely enjoy the many pleasures associated with motorcycling.

Motorcycling has become a popular way to travel. It provides the cyclist with an inexpensive means of transportation, and is also a great way to see our beautiful state.

However, like every other means of travel, motorcycling can be dangerous, particularly for inexperienced operators. Whether you are a new driver or have logged many miles, this manual is for you. It contains information on basic skills that you will need every time you are on the road. And, the equipment required for safe operation is also described.

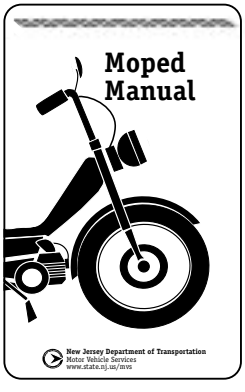
Keep this manual for reference with a copy of the **NJ Driver Manual**. There may be times when you will want to check on the recommended ways to handle a situation and relevant driving concerns.

Safe cycling!

Albert B. Ari
Acting Director

Define a motorcycle

According to state laws, the term **motorcycle** includes motorcycles, motor bikes, bicycles with motors attached and all motor-operated vehicles of the bicycle or tricycle type, except a motorized bicycle (MOPED).



The motor power could be a part of the vehicle, or just attached to it, and the vehicle must have a saddle for the driver to sit on or a platform to stand on while driving.

Motor Vehicle Services offers a separate booklet on MOPEDs available at the agencies, listed on the back pages of this manual.

Get your motorcycle license

Every resident who operates a motorcycle in this state must have a New Jersey motorcycle driver license, or a motorcycle endorsement on their existing NJ basic or commercial license. New Jersey requires a license for driving any motorized vehicle with less than four wheels — motor bikes and scooters included. The exception, when licensing motorcyclists, is the motorcycle cannot be a three-wheeled motor vehicle equipped with a single cab that has glazing around the occupant, seats similar to those of a passenger vehicle or truck, seat belts and automotive steering.

To qualify for a motorcycle license, you must be at least 17* years old. Visit any motor vehicle agency to obtain and complete an application for a motorcycle permit.

Present the completed form, proof of age, identity, your Social Security number and evidence that your presence in the United States is authorized under federal law, with the $5 fee. You'll receive an examination permit that's good for 90 days, a **NJ Driver Manual** and a **Motorcycle Manual**. The manuals contain all applicable rules and regulations used in the examination and list Motor Vehicle agencies, inspection stations and test facilities on the back pages of both publications.

After you study the NJ Driver Manual and the Motorcycle Manual you can take the written and the vision test. It's important to note that you have to pass the vision and written tests before MVS validates your permit for practice driving.

You must also pass an MVS road test at certain facilities. See the back pages of this manual for a list of road test sites. You can make the appointment for your road test when you pass your written and vision tests. However, you may not take your road test for at least 20 days from the date your permit is validated. That will give you time to practice drive.

***Note: The legislation proposed at this printing for the graduated driver license affects motorcycle license applicants who will be subject to the new age and driving curfew requirements of this law at that time. Updated information will be available at www.state.nj.us/mvs. Motorcycle endorsement applicants are exempt.**

After you have practiced (with a New Jersey licensed motorcyclist who should ride another motorcycle), you can keep your road test appointment. Remember that your motorcycle and the accompanying motorcycle must be registered, insured and properly inspected. If you have a valid Class D driver license, you can transport your motorcycle to the site on a flatbed truck, pickup truck or trailer, which eliminates the need for an accompanying motorcyclist. The alternative to the road test is to obtain a road test waiver by successfully completing a Motorcycle Safety Education Riding and Street Skills course (see p. 6 for details).

In New Jersey the annual motorcycle registration fee is $21. If you register from November through March, MVS will prorate the fee for renewal in a warm weather month. To register a motorcycle, bring your insurance card and title to a motor vehicle agency. One license plate with a current inspection sticker must be displayed on the rear of the motorcycle.

For a one-time $10 fee, qualified motorcyclists may obtain disabled license plates that allow them to park in specially marked parking spaces. To obtain, contact the MVS Special Plate Unit, P.O. Box 015, Trenton, NJ 08666-0015.

Motorcycle inspections are held from April 1 through October 31.

If you register in:	you must renew and inspect in:
November	April
December	May
January	June
February	July
March	September

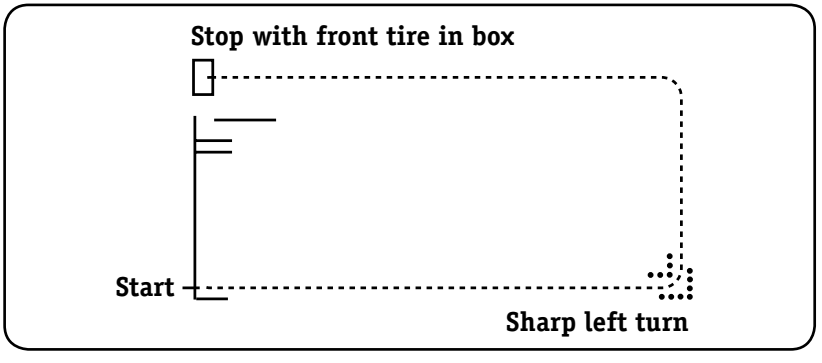
The road skills test checks your coordination and safety practices. Some abilities that you must show are to:

- ride in a straight line at slow speed, and
- weave between markers with both feet on footrests, and
- stop smoothly and quickly, and
- operate in traffic, and
- operate the controls.

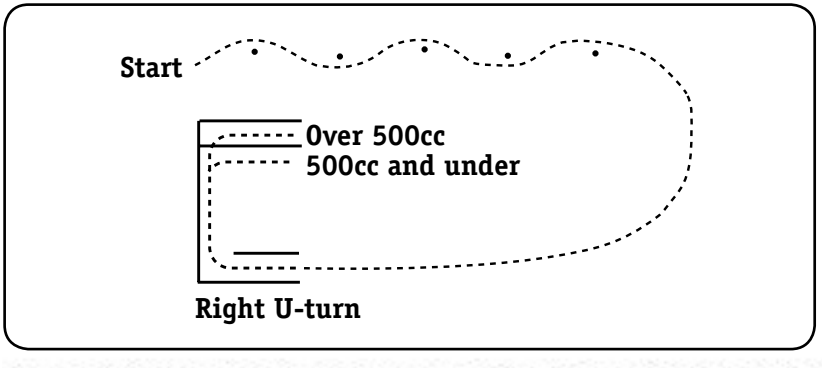
Practice driving

Test runs

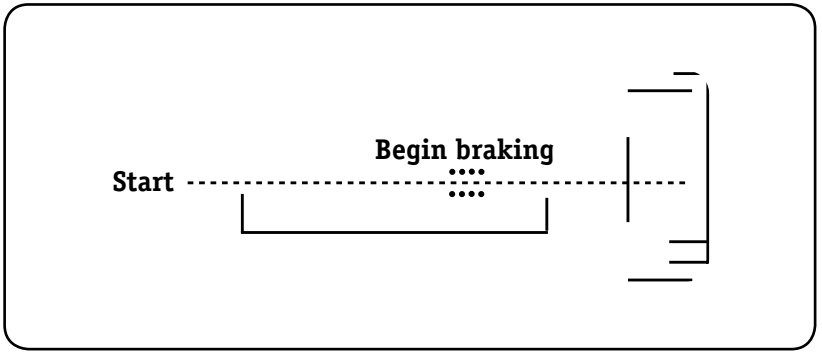
1. **Turning/stopping.** Tests your ability to control the motorcycle while turning and performing a precise stop. The examiner will evaluate you on your ability to stay within the path of the turn without putting your foot down and stop safely in the painted stop box with the front tire of the motorcycle without putting your foot down or skidding the vehicle.



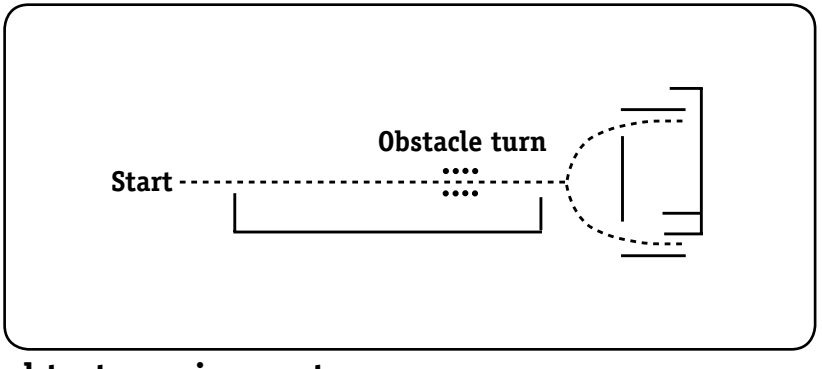
2. **Cone weave (U-turn).** Tests your ability to control the motorcycle at low speed while weaving through cones and making a U-turn in a designated area. The examiner will evaluate you on your ability to stay within the path of travel without touching lines or cones and without putting your foot down. Cones are twelve feet apart with a two-foot offset.



3. Braking. Tests your ability to brake quickly and safely. You will be evaluated on stopping distance in relation to speed or travel.



4. Obstacle turn. Tests your ability to turn the motorcycle quickly to avoid an obstacle. You will be evaluated on your ability to stay within the path of travel and turn quickly without touching a boundary line.



Road test requirements

When you pass the road test, take your permit, ride slip, score sheet and permit validation to any motor vehicle agency, and pay $15 for a four-year photo license. A first New Jersey license (even if previously licensed in another state) must be a photo license.

For a basic or commercial licensed driver, Motor Vehicle Services will add the motorcycle privileges as an endorsement on his/her current

(class D) driver license. An endorsement (or a non-photo license) is $13. Because fees in this manual may change, confirm them by calling (888) 486-3339 toll free from New Jersey and (609) 292-6500 from out of state.

Road test waiver

To qualify for your motorcycle license with a road test waiver, take the Motorcycle Safety Education (MSE) basic course at no charge — in 2000 — through the NJ Division of Highway Traffic Safety, and show the completion card at the MVS Driver Testing Center. The MSE course is given regularly by the NJ Division of Highway Traffic Safety.

Another way to qualify for your motorcycle license with a road test waiver is to complete a NJ Division of Highway Traffic Safety-approved course at a public or private educational institution for a fee. The Division regulates and monitors these courses.

Participation in the programs is voluntary, and completion of the courses does not guarantee a license, as an applicant must also meet other qualifications.

The Division of Highway Traffic Safety also offers a course that gives licensed, experienced riders a driver record point reduction of up to two points (through MVS) for successful completion of the Experienced Rider Course.

For more information about the courses, call (800) 422-3750; for information about your driver record call (609) 292-7500.

Motorcycle RiderCourse®
COMPLETION CARD

NAME DATE

SPONSOR STATE

The bearer of this card has successfully completed a rider-skill training course that meets the requirements established by the Motorcycle Safety Foundation, 2 Jenner St., Ste. 150, Irvine, CA 92618-3806. This card is not a permit or license and may not be used as such.

N.J.B. 08002 INSTRUCTOR'S SIGNATURE AND I.D. #

New Jersey Motorcycle Safety Program

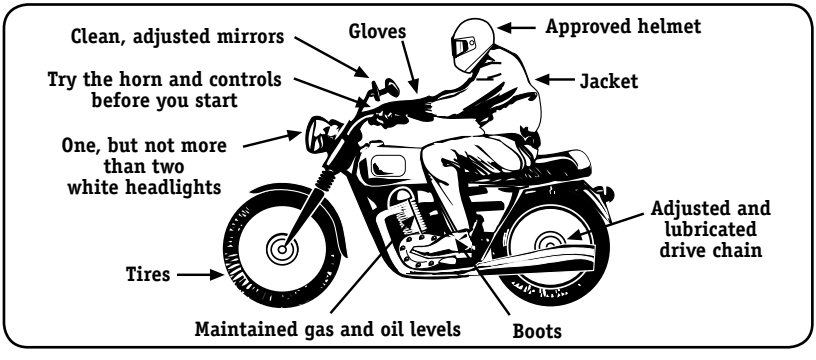
Administered by

Division of
Highway Traffic Safety

For more information, phone
1-800-422-3750
Ride Safe, Ride Smart. Pass it On!

Prepare to ride

As a rider, what you do before you start a trip goes a long way toward determining if you'll get where you want to go safely. Before driving your motorcycle, you should check your gear, your motorcycle and recognize operational differences (particularly if it's a borrowed motorcycle).



Gear check

A good rider always prepares for a trip wearing:

- an approved helmet,
- eye and face protection, and
- protective clothing.

The helmet

The single most important thing you can do to improve your chances of surviving an accident is to wear a securely fastened, approved helmet. It protects against wind blasts, cold, and flying objects, and provides comfort. Since one of every five accidents reported involves head or neck injuries, it's important that you protect yourself from your greatest threat of injury.

Helmet use

Some riders don't wear helmets because they think helmets will limit their view to the sides. Others wear helmets only on long trips or when riding at high speeds. However, **helmets are required by law** and riders

who don't wear them may be fined. Here are some additional facts to consider:

- an approved helmet lets you see as far to the sides as necessary. A study of more than 900 motorcycle accidents, in which 40% of the riders wore helmets, failed to find even one case where a helmet kept a rider from spotting danger.
- most accidents happen on short trips (less than five miles long), soon after starting.
- even low-speed accidents can be fatal. Most riders are going slower than 30 mph when they get hurt. At these speeds, helmets can cut both the number and severity of head injuries by half.

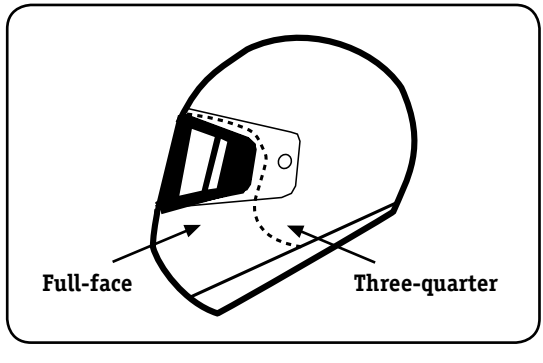
No matter what the speed, unhelmeted riders are three times more likely to die from head injuries than are riders who are wearing helmets at the time of the accident.

Helmet selection

There are three primary types of helmets that provide three levels of coverage: one-half, three-quarter and full-face.

Whichever helmet style you choose, get the most protection by making sure it:

- meets U.S. Department of Transportation (USDOT) Federal Motor Vehicle Safety Standard (FMVSS) 218. First look for the DOT symbol on the outside back of the helmet. Then look for a label inside the helmet with the manufacturer's name, month and year of manufacture, construction materials, model and size and other pertinent information.



Helmets that comply with FMVSS have a firm polystyrene inner liner that's one-inch thick.

- gives you added assurances of safety. Check for the American National Standards Institute (ANSI) or the Snell Memorial Foundation labels in the helmets.
- fits snugly, all the way around. The helmet must be equipped with a chin strap and have at least four square inches of red, amber or white reflectorized tape on each side.
- lacks obvious defects such as cracks, loose padding, or frayed straps.

Not all helmet damage is obvious. To increase your margin of safety, buy a new, not a used helmet.

Whatever helmet style you select, make sure to keep it securely fastened on your head when you ride. Otherwise, if you have an accident, it's likely to fly off your head before it gets a chance to protect you.

Eye and face protection

Although a full-face helmet is best, a plastic face shield helps protect your face from wind, dust, dirt, rain, insects and debris. Your full attention should be on the road — not on these problems.

Goggles can protect your eyes from all these things, though they won't protect the rest of your face like a face shield does. Most windshields will not protect your eyes from wind. Neither will eyeglasses or sunglasses. Glasses won't keep your eyes from watering and they might blow off when you turn your head while riding.

The face shield and/or goggles must meet U.S. Department of Transportation and New Jersey standards, and should have the ANSI label. Because they are plastic, face shields and goggles will develop scratches and become brittle with age. To get the maximum protection and comfort from the products, you should replace them regularly.

Effective eye or face protection must:

- be scratch free,
- be made of shatterproof material,

- give a clear view to either side,
- fasten securely so that it cannot blow off,
- allow air to pass through, so it won't fog, and
- allow enough room for eyeglasses or sunglasses, if needed.

Tinted eye protection should not be worn at night or any other time when little light is available.

Clothing

Clothing can help protect you in an accident.

Jackets and pants should cover your arms and legs completely and provide comfort. Make sure they fit snugly enough to keep from flapping in the wind, yet loosely enough to let you move freely. Leather offers the most protection, but heavy denim does an adequate job in most cases. However, sturdy synthetic material can give you a lot of protection as well. Wear a jacket even in warm weather. Many jackets are designed to protect you without getting you overheated, even on summer days.

Boots or shoes should be high enough to cover your ankles and sturdy enough to give support. Soles should be made of hard, durable material. Heels should be short, so they do not catch on rough surfaces. If your boots or shoes have laces, be sure they're tucked in so they won't catch on your motorcycle.

Full-finger leather gloves are also important. They give you a better grip and help protect your hands in an accident. Your gloves should be made of leather or heavy cloth.

In cold or wet weather, your clothes should keep you warm and dry, as well as protect you from injury. You cannot control a motorcycle well if you are numb. Riding for long periods in cold weather can cause severe chill and fatigue. A winter jacket should resist wind and fit snugly at the neck, wrists, and waist. Rain suits should be of good quality, sized so they can go on and off easily, and designed for riding. Otherwise, they may tear apart or balloon up at high speeds. Some gloves are made to keep wind or rain from going up your sleeves.

Motorcycle check

If something's wrong with the motorcycle, you'll want to find out about it before you get in traffic. Here are the things you should check before every ride.

While walking to the motorcycle, take a good look at your tires. If one looks low, check the pressure. A motorcycle does not handle properly if the air pressure is too low, which could result in tire failure.

Look under the bike for signs of oil or gas leaks. If there is a puddle, determine the cause and get the leak fixed.

Before mounting the motorcycle, make the following checks:

TIRES. Keep your tires in good condition. Check for:

Inflation. The motorcycle does not handle properly if the air pressure is too low or too high. Check the owner's manual for the right amount of air.

Tread. Worn or uneven tread can make the motorcycle hard to handle, particularly on wet pavement.

Damage. Check for cuts or objects stuck in the tread. Also, the sidewalls should be checked for cracks. A blowout on a motorcycle can be extremely dangerous.

CONTROLS. Make sure the controls work before you start out.

Brakes. Try the front and rear brakes one at a time. Make sure each one holds the motorcycle when it is fully applied.

Clutch and throttle. Make sure the controls work smoothly. The throttle should snap back when you let it go.

Cables. Check the cables for kinks or broken strands. If a cable breaks while you are riding, an accident could result.

LIGHTS. Make sure your lights work. Keep them clean and regularly check:

Turn signal. Check all four turn signal lights. Make sure they flash when they are turned on and are bright enough to be seen.

Headlight. Check your headlight. In daytime, pass your hand in front of the beam to make sure the headlight is really on. At night, try your dimmer to make sure both high and low beams are working.

Tail and brake light. Try each of your brake controls and make sure that each one flashes your brake light.

HORN. Try the horn. Find out if it doesn't work before you have to use it.

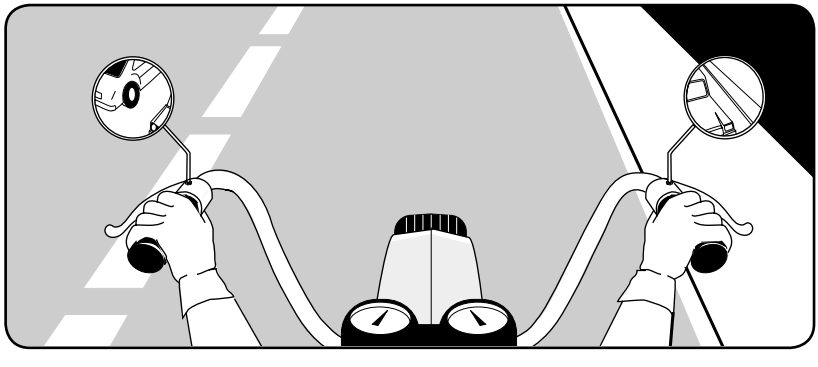
CHAIN. Make sure the drive chain is properly adjusted and lubricated. When your weight is on the cycle, the chain shouldn't sag more than 3/4 inch.

MIRRORS. Clean and adjust both your mirrors before you start. It is difficult and dangerous to ride with one hand while you try to adjust a mirror.

Swing your mirrors outward far enough to see around your own body. Adjust each mirror so that it lets you see about half the lane behind you and as much as possible of the lane next to you.

GAS AND OIL. Check gas and oil levels before you start. Running out of gas is inconvenient. It can also be dangerous if it happens where you cannot get off the road quickly.

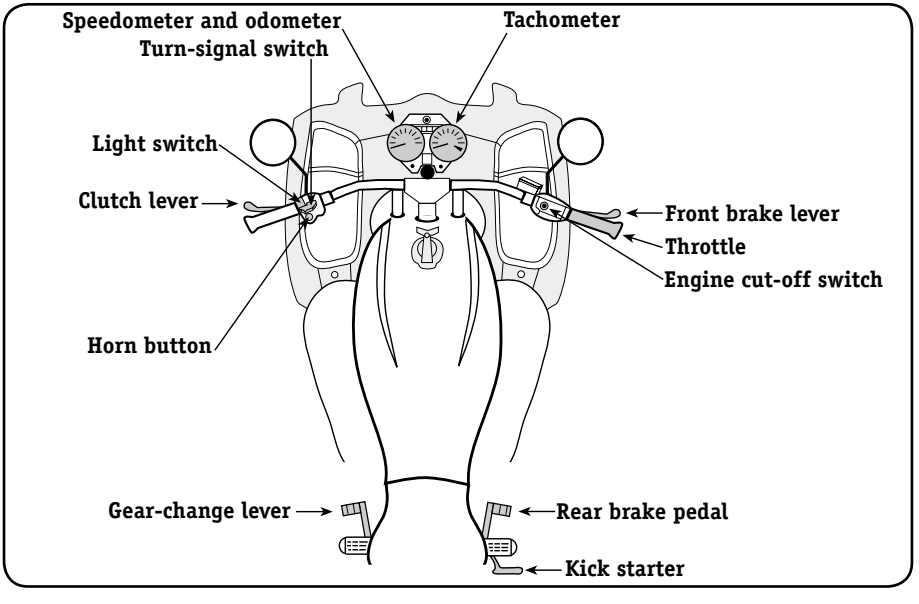
Lack of oil can cause your engine to seize. This could lock your rear wheel and cause you to lose control. Motorcycles tend to use oil faster than cars.



Get familiar with the motorcycle

Make sure you are completely familiar with the motorcycle before you ride it on the street. If the cycle is borrowed:

- make all the checks you would on your own cycle.
- find out where everything is, particularly the turn signals, horn, headlight switch, fuel control valve, and motor cut-off switch. Make sure you can find and operate them without having to look at them.
- check the controls. Learn the gear pattern. Work the throttle, clutch, and brakes a few times before you take off. All controls react a little differently.
- ride very cautiously until you know the way the motorcycle handles. For instance, take turns slower and give yourself extra stopping distance.

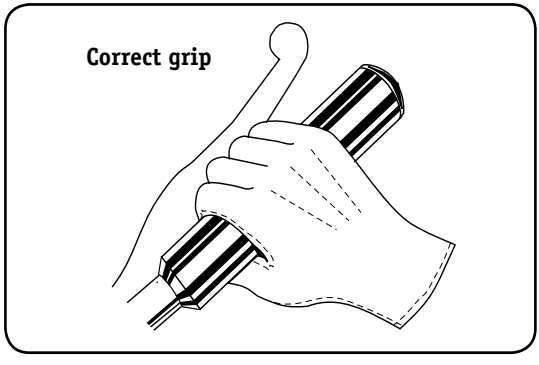


Control for safety

To learn how to control direction, speed or balance, you'll need a lot of practice. However, this manual will suggest some ways to keep control of the motorcycle and avoid accidents.

Body position

To control a motorcycle well, your body must be in the proper position.



Seat. Sit far enough forward so that your arms are slightly bent when you hold the handlebars without having to stretch.

Hands. Hold the handlegrips firmly. This helps you keep your grip if the motorcycle bounces. Start with your right wrist down. This helps you keep from accidentally using too much throttle.

Knees. Keep your knees against the gas tank. You will keep your balance as the motorcycle turns.

Feet. Keep your feet firmly on the footpegs. Firm footing can help you keep your balance. Don't drag your foot along the ground. If your foot catches on something, you could lose control of the motorcycle. Keep your feet near the controls, to get to them fast if necessary. Also, keep your toes up. If not, they may get caught in between the road and footpeg.

Posture. Sit fairly erect. This lets you use your arms to steer the motorcycle rather than to hold yourself up.

Turning

New riders often try to take curves or turns too fast. When they can't hold the turn, they may cross into another lane of traffic, go off the road, or panic and brake too hard, causing a skid and loss of control. Until you learn to judge how fast you can safely take a curve, approach

all turns with caution. When turning, use the following steps for better control:

Slow. Reduce speed before the turn. Keep speed down until you complete the turn.

Look. Use your head and eyes for directional control. Look through the turn to where you want to go.

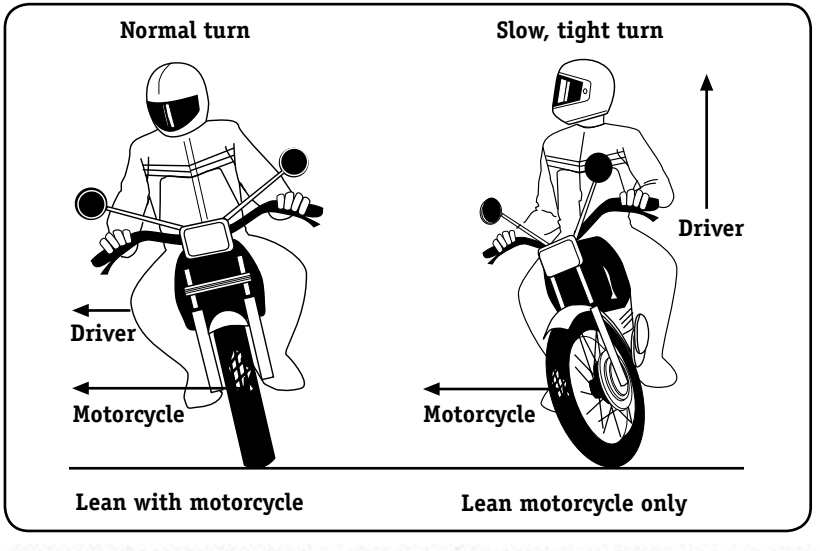
Lean. To turn, the motorcycle must lean. To lean the motorcycle, push on the handgrip in the direction of the turn. In other words, push left, lean left, go left, push right, lean right, go right.

Roll. Roll on the throttle through the turn. Maintain steady speed or accelerate gradually. Avoid decelerating in the turn.

Higher speeds and/or tighter turns require more lean. In normal turns, the rider and motorcycle should lean together. In slow, tight turns, lean the motorcycle **only** and keep your body straight.

Braking

Your motorcycle has two brakes. You need both of them to stop effectively. The front brake is the more powerful of the two brakes. It



provides about three-quarters of your stopping power. You must be careful in using the front brake. If you squeeze the brake lever too hard, you may lock the front wheel. This is most likely to happen on wet pavement. If your front wheel locks, the motorcycle is almost certain to fall. However, if you learn to use the front brake properly, there is no danger.

Here are some things to remember about braking:

- practice using the front brake correctly. Braking is an activity that requires continuous practice for maximum proficiency.
- use both brakes every time you slow down or stop. If you use only the rear brake for "normal" stops, you may not have enough skill to use the front brake properly when you really need it.
- apply both brakes at the same time. Some people believe that the rear brake should be applied first. That is not true. The sooner you apply the front brake, the sooner it will start slowing you down.
- you can use the front brake in a turn. Some people think this is dangerous. It is dangerous if the road is very slippery and the brake is not used properly. Otherwise, it is no more dangerous to use the front brake in a turn than it is when you are stopping in a straight line. The technique for stopping in a turn is different from braking on a straight run.

Shifting

There is more to shifting than getting the motorcycle to accelerate smoothly. Accidents occur if the gears are used incorrectly when downshifting, turning, or starting from a standstill on a hill.

Downshifting

It is important to shift down through all the gears as you slow down or stop. This way you always have enough power to accelerate quickly if you need to.

Make certain you are going slowly enough when you shift into a lower gear. If you are going too fast, the motorcycle will lurch and the rear wheel may lock up. This is more likely to happen:

Going downhill. The motorcycle tends to pick up speed on a down grade.

Shifting into first gear. On many motorcycles, the speed range for first gear is very low.

Under these conditions, you may need to use the brakes in order to slow down enough to shift safely.

Turning

Do not upshift or downshift in a turn unless you can do it very smoothly. A sudden change in power to the rear wheel can cause it to lock or spin. The result can be a skid. It is best to change gears before entering a turn.

Going uphill

It is more difficult to get the motorcycle moving on an upgrade than it is on flat ground. There is always a danger of rolling backward into someone behind you. Here is what you have to do:

- use the front brake to hold the motorcycle while you start the engine and shift into first gear.
- change to the foot brake to hold the cycle while you operate the throttle with your right hand.
- open the throttle a little bit for more power.
- release the clutch gradually. If you release it too quickly, the front wheel may come off the ground or the engine may stop, or both.
- release the foot brake when the engine begins to slow down. This means the engine is taking hold.

See, be seen and be heard

In accidents with motorcyclists, car drivers often say that they never saw the motorcycle. From ahead or from behind, a motorcycle's outline is small. Because you and your bike are smaller than other vehicles, it's easier for others to misjudge your distance and speed. However, you can help make you and your cycle more noticeable.

Clothing

Bright reflective helmets and clothing help others see you. Upper body clothing should be brightly colored orange, yellow, red or green. Fluorescent colors may suffice in bright daylight, but at night you'll need reflective or retro-reflective* clothing.

Headlight

The best way to help others see your motorcycle is to **keep the headlight on at all times.** During the day, a motorcycle with lights off is twice as likely to go unnoticed. The headlight in most later model motorcycles comes on automatically.

Signals

The signals on a motorcycle are similar to those on a car. However, signals are far more important to a rider.

Turn signals**

Use turn signals to:

- tell others what you plan to do anytime you plan to change lanes, and
- make you easier to spot. Other drivers can easily see your signals. That's why it's a good idea to use them even when what you plan to do is obvious.

***Reflective materials are passive and do not change their brightness. Retro-reflective materials change brightness with surrounding light sources. They greatly increase the visibility of objects at night or during inclement weather.**

****N.J.S.A. 39:4-126 states the required signal may be given "by means of the hand and arm . . . or by an approved mechanical or electrical signal device. . . . A signal of intention to turn right or left when required shall be given continuously during not less than the last 100 feet traveled by the vehicle before turning."**

Note: Turn off your signals once you've made your turn. If not, another driver may think you plan to turn again and pull in front of you.

Brake light

You can help others notice you by tapping the foot brake lightly before you slow down. This will flash your brake light. It is very important to signal others by flashing your brake light whenever:

- you are going to slow down more quickly than might be expected. (For example, before you make a turn from a high-speed highway.)
- you are going to slow down where others may not expect it (e.g., before you slow down to turn in the middle of a block).

If you are being followed closely, it's a good idea to flash your brake light before you slow down. Note that you can't do this in an emergency situation.

Horn

Use your horn to get someone's attention, but don't rely solely on it.

It is a good idea to give a quick beep before you pass anyone. Here are some situations where you'll use the horn:

- a driver in the lane next to you is getting too close to the vehicle ahead and may want to pass, or
- someone is in the driver's seat of a car parked on the street, riding a bicycle, or walking in the street, and may cut in front of you.

In an emergency, sound the horn and be ready to slow or turn away from the danger.

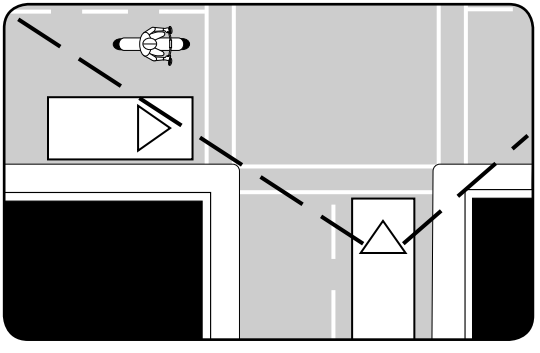
The two biggest dangers are:

- oncoming cars that turn left in front of you, and
- cars on side streets that pull out into your lane. Never count on "eye contact" as a sign that a driver has seen you and will yield the right-of-way. All too often, a driver looks right at a motorcyclist and still fails to see him.

Road position

Drive to your advantage. A car driver has very little choice about where he positions his car in a lane. However, each marked lane gives a motorcyclist three possible paths of travel.

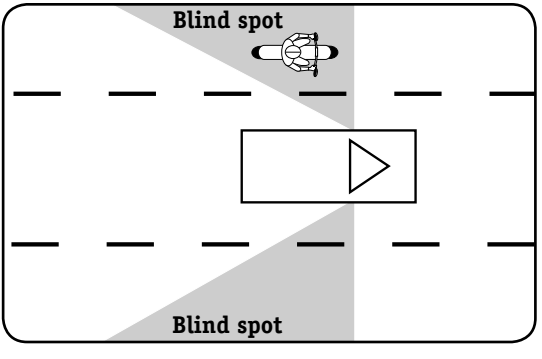
The main idea of positioning yourself to be seen is: ride in the portion of the lane where it is most likely that you will be seen.



Make sure you are in the other driver's line of sight.

Blind spots

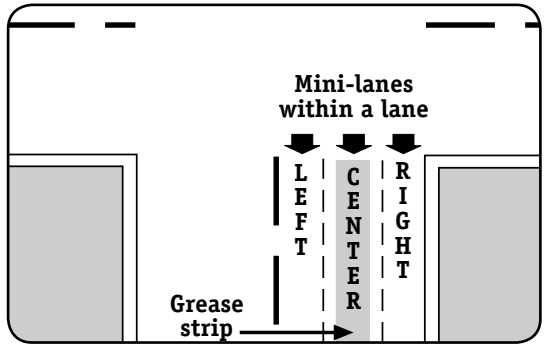
Pass the other vehicle or drop back. When you pass a car, get through the blind spots as quickly as you can. Approach with care. But once you are alongside, speed up and get by quickly.



Center lane

Ride where a driver can see you in the rearview mirror. If you can see the rearview mirror of the car ahead of you, it's likely the driver can see you too. Some people feel that riding in the center is dangerous due to the

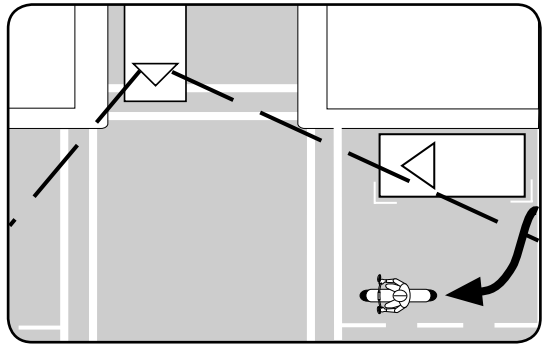
grease strip formed by grease drippings from other vehicles. Such fears are unfounded.



You can operate to the left or right of the grease strip and still be within the center. Unless the road is wet with rain, the average grease strip allows as much traction as the rest of the pavement. However, big buildups of grease found at very busy intersections or toll booths should be avoided.

Intersections

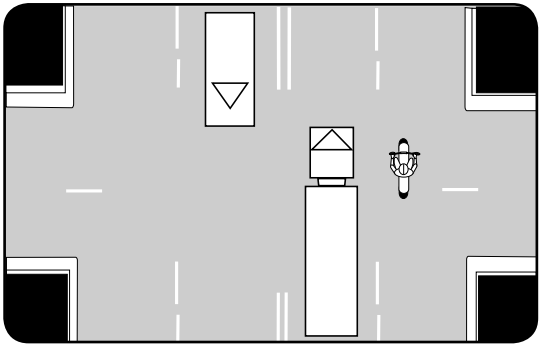
Enter the intersection by positioning yourself with a space cushion on either side that allows you to take evasive action. Approach an intersection so you have the best view of oncoming traffic and with your lights on. At a blind intersection, move to the portion of the lane that brings you into another driver's field of sight.



Remember, the key is to see as much as possible. This will usually make you as visible as possible while protecting your space.

Larger vehicles

Drivers can see another car, a truck, or a bus more easily than they can see a motorcycle. You can use this to your advantage. Let the other vehicles run interference for you.



Move across intersections with larger vehicles for protection.

Use the SIPDE system

Nothing you do will guarantee that others will see you. The only eyes you can really count on are your own. A good rider is always "looking for trouble" — not to get into it, but to stay out of it.

Experienced riders make a practice of being aware of what is going on around them. They can create their riding strategy by using a system known as SIPDE.

SIPDE is an acronym for the process used to make judgments and take action in traffic. It stands for:

Scan
Identify
Predict
Decide
Execute

Let's examine each of these steps.

Scan

Search aggressively for potential hazards. Scanning provides you with the information you need to make your decisions in enough time to take action.

Identify

Locate hazards and potential conflicts. The hazards you encounter can be divided into three groups based on how critical their effect on you may be.

Cars, trucks, and other vehicles. They share the road with you; they move quickly, and your reactions to them must be quick and accurate.

Pedestrians and animals. They are characterized by unpredictability and short, quick moves.

Stationary objects. Potholes, guardrails, bridges, roadway signs, hedges, or rows of trees won't move into your path, but may create or complicate your riding strategy.

The greatest potential for a conflict between you and other traffic is at intersections. An intersection can be in the middle of an urban area or at a driveway on a residential street — anywhere other traffic may cross your path of travel. Most motorcycle/automobile collisions occur at intersections. And most of these collisions are caused by an oncoming vehicle turning left into the path of the motorcycle. Your use of SIPDE at intersections is critical.

Before you enter an intersection, search for:

- oncoming traffic that may turn left in front of you,
- traffic from the left,
- traffic from the right, and
- traffic approaching from behind.

Be especially alert at intersections with limited visibility. Be aware of visually busy surroundings that could camouflage you and your motorcycle.

Predict

Anticipate how the hazard may affect you. The moving direction of a potential hazard is important. Clearly, a vehicle moving away from you is not as critical as a vehicle moving in your path.

Determine the effect of the hazard — where a collision might occur. How critical is the hazard? How probable is a collision? This is the "What if . . . ?" phase of SIPDE that depends on your knowledge and experience. Now estimate the consequences of the hazard. How might the hazard — or your effort to avoid it — affect you and others?

Decide

Determine how to reduce the hazard by:

- communicating your presence and intentions,
- adjusting your speed, and
- adjusting your position.

Communication is the most passive action you can take since it depends on the response of someone else. Use your lights and horn, but don't rely on the actions of others.

Adjustment of speed can be acceleration, slowing or stopping.

Adjustment of position can be changing lane position or completely changing direction.

In both cases, the degree of adjustment depends on how critical the hazard is and how much time and space you have. The more time and space you have to carry out your decision, the less amount of risk you'll encounter.

In areas of high potential risk, such as intersections, give yourself more time and space by reducing the time you need to react. Cover both brakes and the clutch and be ready with possible escape routes.

Execute

Carry out your decision. This is when your riding skills come into play. And this is where they must be second nature. The best decision will be meaningless without the skills to carry it out. Know your limits and ride within them.

Check blind spots

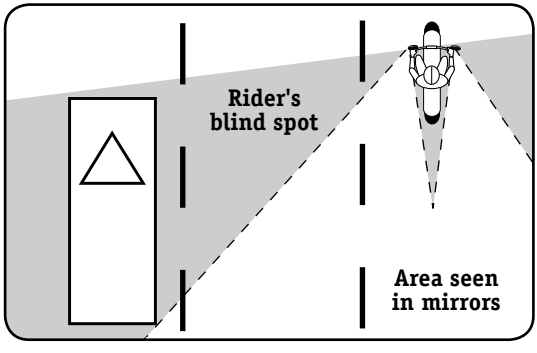
Using head checks

Motorcycles have blind spots just like cars do. When you change lanes, make sure to turn your head and look over your shoulder at traffic behind you. That is the only sure way to see a car behind you in the next lane. It is particularly important if you tend to make rapid lane changes, as many riders do. There is very little chance a driver in the next lane can react quickly enough to avoid you once you have started to move.

On a roadway with several lanes, check the far lanes as well as the one next to you. Another driver may be headed for the same space you are.

Using your mirrors

Traffic situations change quickly. To know what is behind you, check your mirrors every few seconds. That way, you won't be caught off guard if a car overtakes and passes you. There are also particular times when it is very important to use your mirrors:



Before changing lanes, look behind you.

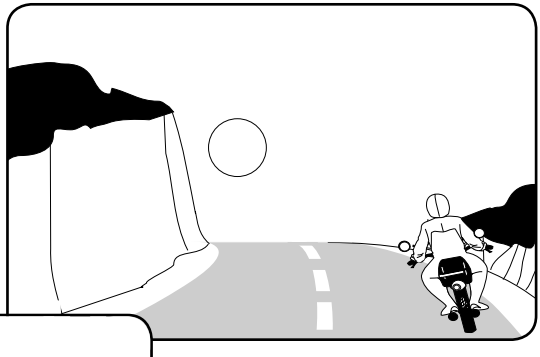
- when you have to slow down or stop suddenly. If there is someone close behind you, it may be better to keep moving.
- when you are stopped at an intersection. Watch cars approaching from behind. If the driver isn't paying attention, he could be right on top of you before he notices you are there.
- any time you change lanes. Make sure no one is about to pass you.
- any time you turn. Watch cars behind, especially if you plan to turn where others may not expect it, such as alleys, driveways, and side streets.

Many motorcycles have rounded convex mirrors. They give a bigger view of the road behind them than flat mirrors do. However, they also make cars seem farther away than they really are. If you are not used to convex mirrors, try this: While you are stopped, pick out a parked car in your mirror. Try to form a mental image of how far away it is. Then turn around and look at it. See how close you came. Practice this until you become a good judge of distance. Even then, allow extra distance before you change lanes. Also, make a final head check before you change lanes.

Positioning

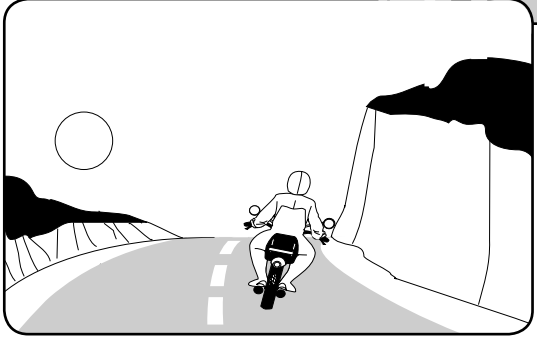
As a motorcycle rider, you can put yourself in a position to see things that a driver of a car cannot see. Ride in the portion of the lane where it is most likely that you will be seen.

Driving on curves. You can move to one side of the lane or the other to get a better view through the curve.



Correct for outside curves.

Correct for inside curves.

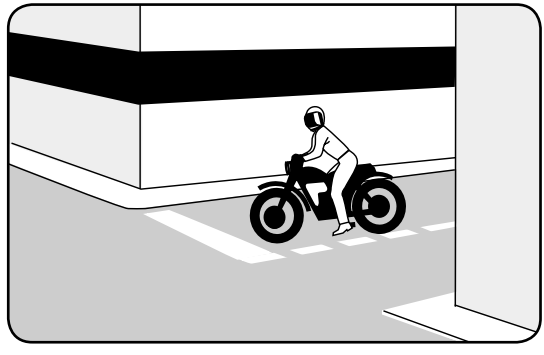


Watching at intersections. You don't have six feet of car sticking out in front. Therefore, you can peek easily around buildings, parked cars, or bushes to see if anything is coming.

Stopping at blind intersections. Blind intersections can make it hard to see danger coming from the side. If you have a stop sign, stop there first. Then edge forward

and stop again, just short of where the cross-traffic lane meets your lane. From that position, you can lean your body forward and look around buildings, parked cars, or bushes to see if anything is coming. Just make sure your front wheel stays out of the cross lane of travel while you're looking.

Seeing at the roadside. You can angle a motorcycle across the road so that you can see both directions without straining. This is particularly important if you plan to make a U-turn.



At intersections, peek around buildings.

Keep your distance

The best protection you can have is distance — between yourself and others. If someone else makes a mistake, distance gives you time to react, and some place to go.

Front

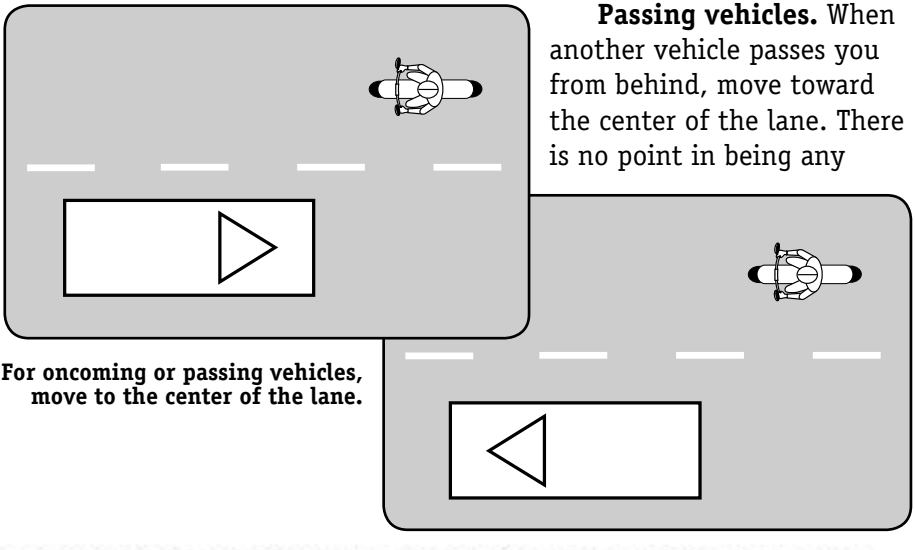
Under ordinary conditions, try to keep at least two seconds distance between yourself and the car ahead. This gives you plenty of time to react if the driver ahead of you stops suddenly. It also gives you a better view of things in the road, such as potholes, slippery spots, chunks of tire tread, or cans.

Keep well behind the car ahead even when you are stopped. This will make it easier to get out of the way if someone bears down on you from behind.

Side

The motorcycle rider can move from one side of the lane to another to increase his distance from other cars. An experienced rider changes his position from one side of the lane to another as traffic conditions change.

Here are some of the conditions that require changes in lane position:



For oncoming or passing vehicles, move to the center of the lane.

Passing vehicles. When another vehicle passes you from behind, move toward the center of the lane. There is no point in being any

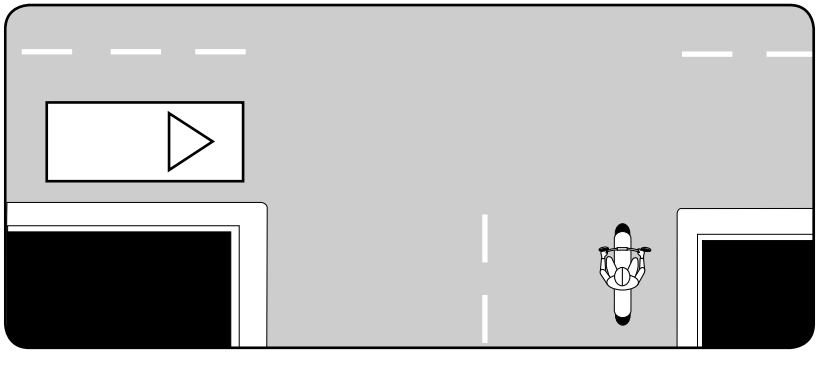
closer to a passing vehicle than you have to be. A slight mistake by either driver could cause a sideswipe. Moving toward the center of the lane also helps to keep you out of the way of extended mirrors or things thrown from car windows. Do the same for oncoming vehicles.

Give way to large trucks. They can create gusts that affect your control. You have more room for error if you are in the middle of your lane.

Driving at intersections. Most collisions between cars and motorcycles happen at intersections. Drivers often have a hard time seeing a motorcycle coming directly at them. A car may make a left turn across the motorcycle's path, or a car may pull out from a side street into the motorcycle's path. These are two leading causes of motorcycle accidents at intersections.

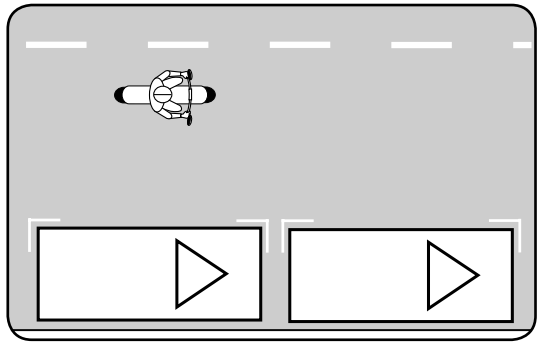
If a car can enter your path, assume that it will enter your path, and:

- move as far away from the car as you can. If the car is on your right, move to the left. For a car on your left or an oncoming car with a left turn signal on, move to the right.
- change lanes if you can. Otherwise, move to the far side of the lane you are in.
- approach slowly. If a driver does pull out suddenly, your chances of making a quick stop or a quick turn are better.



At intersections, move as far away from oncoming cars as you can.

Passing parked cars. When passing parked cars, the motorcycle rider has an advantage over the automobile driver. By staying in the left portion of the lane, you can avoid the problems caused by doors opening, drivers getting out of cars, or people stepping from between cars.



Stay to the left of the lane to pass parked cars.

A bigger problem is cars pulling out. Drivers often take a quick look behind them and fail to see a motorcycle. Cars making U-turns are a particular danger. The motorcyclist sees them pull out and slows down or changes lanes to let them enter. Then suddenly the car turns across the road and blocks the lane. This leaves the motorcyclist with no place to go. If you see a car pulling out, approach very cautiously.

Sharing lanes. Cars and motorcycles each need a full lane in which to operate safely. Automobile drivers and motorcycle drivers should not share lanes.

As a motorcycle rider, there are things you can do to prevent lane sharing. Don't ride between rows of stopped cars. Don't try to squeeze past a stopped car in the same lane. Anything can happen — a hand could come out a window, a door could open, a car could turn suddenly. Discourage lane sharing by others. The best way to do this is to keep a center lane position in situations where other drivers might be tempted to squeeze by you.

If you move to the far side of the lane in these situations, you invite the driver to share the lane with you. Lane placement depends on different circumstances. You should ride in the portion of the lane where it is most likely that you will be seen.

Merging cars. Cars entering a highway from an entrance ramp may have trouble seeing a motorcycle. The headlight on the motorcycle is not very visible at an angle. Don't assume that a driver on an entrance ramp sees you. Change lanes or make space to let the driver in.

Cars alongside. Don't ride alongside cars if you don't have to. A car in the next lane could change into your lane at any time without warning. Cars in the next lane also block your escape if you run into danger in your own lane. Speed up or drop back until you find a place that is clear on both sides.

Back

Many riders complain about tailgaters. They are people who follow others very closely. If someone is following you too closely, signal, change lanes and let the tailgater pass. If this isn't possible, give the tailgater a hand signal to drop back. Be sure to give a friendly "thank you" signal when the other driver drops back.

If a driver still follows you too closely, try to:

- open up additional following distance from the car ahead. This gives you and the tailgater more time to react in an emergency.
- slow down so the tailgater can pass when the way is clear.

Handle dangerous surfaces

A motorcycle is delicately balanced on two wheels. To stay upright, the two wheels must have a firm footing. Any surface that affects the motorcycle's footing will affect its balance. Any slippery surface increases your chances of falling. Dangerous surfaces include:

- slippery surfaces,
- uneven surfaces,
- grooves and gratings, and
- sloping surfaces.

Slippery surfaces

Some slippery surfaces are:

- liquids,
- sand/gravel,
- leaves,
- wet pavement, particularly just after rain and before surface oil washes to the side of the road,
- gravel roads, or places where sand and gravel have collected on paved roads,
- mud, snow, and ice, and
- wet lane markings and steel surfaces (manhole covers)
- metal construction plates.

There are a number of things you must do to operate safely on slippery surfaces.

Reduce speed. It takes longer to stop on slippery surfaces. You must make up for this by going at slower speeds. It is particularly important to reduce speed for curves. Remember, speed limits posted on curves apply to good surface conditions.

Use both brakes. The front brake is still more effective than the back brake even on a slippery surface. The only time you shouldn't use the front brake is if the surface is extremely slippery, like ice. Then, you shouldn't brake at all.

Avoid sudden moves. Any sudden change in speed or direction can cause a skid on slippery surfaces. Therefore, you should turn, brake, accelerate, and change gears as little and as gradually as possible. On a very slippery spot, such as a patch of ice, you should make no changes at all until you cross it.

Avoid slippery areas. Try to find the best pavement, because:

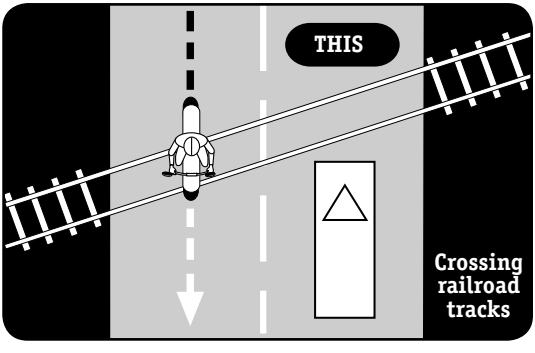
- oil from cars tends to build up in the center of the lane, particularly near intersections where cars slow down or stop. On wet pavement, therefore, it is better to operate in the track created by the wheels of moving cars. Some people suggest using the left wheel track all the time. However, it is not always a good idea. You have to change your lane position for traffic and roadway conditions. Ride in the portion of the lane where it is most likely that you will be seen.
- oil spots when you stop or park. If you put your foot down in the wrong spot, you may fall.
- dirt and gravel tend to collect along the sides of the road. It is very important to stay away from the edge of the road when you make sharp turns at intersections or enter and leave freeways at high speed.
- certain sections of the road dry out fastest after a rain, or melt fastest after a snow. Try at all times to stay in the best part of the lane.

Avoid very slippery areas. It is almost impossible to maintain balance on ice, hard-packed snow, or wet, slippery surfaces. Avoid them if possible. If you can't, proceed across them in a straight line — do not adjust your speed. Keep a center lane position and avoid the slippery area by riding slightly to the left or right of the center. You can pull in your clutch and coast across. In some slippery areas such as toll booths you may have to ride slightly to the left or right of the center.

Uneven surfaces

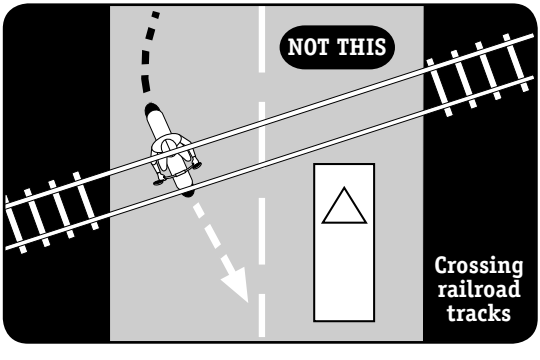
Watch for uneven surfaces such as bumps, broken pavement, potholes, or railroad tracks across the road. If the condition is bad enough, it could affect your control of the motorcycle. Follow these guidelines to handle uneven surfaces:

- slow down to reduce the impact,
- straighten out your course so that the motorcycle is upright, and
- rise slightly on the foot pegs so that you can absorb the shock with your knees and elbows.



Cross railroad tracks at an angle. If you have to turn to cross the tracks head on, it may be more dangerous than crossing at a slight angle.

Turn when you want to cross something that is running parallel to your course, such as trolley tracks, ruts in the middle of the road, or a pavement seam. To cross something running next to you, move away far enough to be able to cross it at an angle. Then, just make a quick sharp turn. Do not try to edge across it. It could catch your tires and upset your balance.



Grooves and gratings

When you ride over rain grooves or a metal bridge grating, the motorcycle will tend to wander back and forth. While this may give you an uneasy feeling, it is not generally dangerous. Therefore, the best thing to do is stay on course and ride it out. Ride straight across.

Sloping surfaces

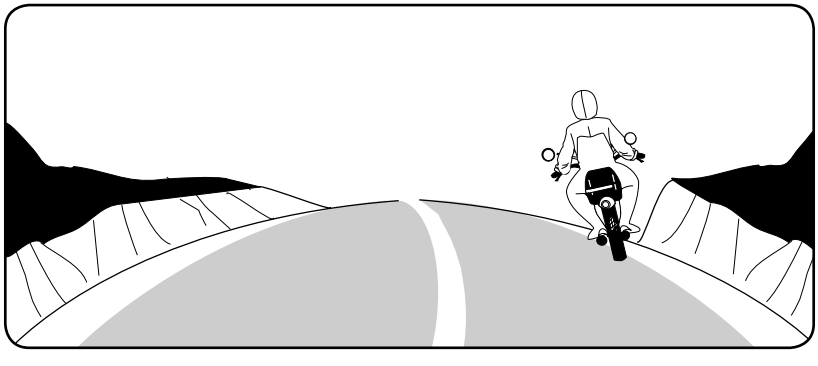
A road surface that slopes from one side to the other is not difficult to handle when you are going straight ahead. However, in a curve, a slope can make the turn harder if it goes the wrong way.

Here is a picture of a rider turning left on a high crowned curve, that is, a road that is higher in the middle than at the sides.

A turn to the left on a high crowned road is like a turn on a curve that is banked the wrong way. The crown makes the turn harder by:

- cutting down on the clearance between the left footpeg and the surface.
- adding the force of the downslope to the outward force of the turn, increasing the chance of a skid.
- making it necessary to turn uphill.

The only way to handle the wrong-way banking is to slow down. This will straighten the motorcycle and reduce the outward force.



Slow down on high-crowned curved roads.

Ride cautiously at night

At night, your ability to see and be seen is limited. With one headlight, it is hard to see the condition of the road or something lying in your path. At night, other drivers also have a hard time picking your headlight and taillight out of the stronger lights of other cars.

When you ride at night, here are some things that will help:

Use your high beam. Get all the light that you can. Use your high beam whenever you are not following or meeting a car. You should be able to stop in the distance that's lighted.

Reduce your speed. If there is something lying in the road ahead, you will not be able to see it until you are very close to it. If you are going too fast, you may not be able to avoid it. It is important to reduce your speed at night, particularly on roads that you don't know well.

Use the car ahead. If there is a car ahead, use it to your advantage. Its lights can give you a better view of the road ahead than your own lights. Car taillights bouncing up and down can alert you to bumps or rough pavement.

Increase distance. You cannot judge distance as well at night. Make up for this by allowing extra distance from the car. Leave more room on either side of you when riding alongside cars. Give yourself more distance to pass another car.

Know hazards

No matter how careful you are, there will be times when you find yourself in a tight spot. Your chances of getting out safely depend upon your ability to react quickly. Here are some emergencies and ways to handle them.

Driving hazards

Quick stops

Since the front brake supplies about three-quarters of your braking power, you must use it to stop quickly. Squeeze the brake lever steadily and firmly. Do not grab at it. Apply it as fully as you can without locking the front wheel.

The rear brake should be applied at the same time. Try not to lock the rear wheel. A locked rear wheel is not as likely to cause a fall as a locked front wheel. However, it makes the cycle hard to control.

Tire failure

If the cycle starts handling differently, pull off and check the tires. You seldom hear a tire go flat, instead, you'll feel it.

If the front tire goes flat, the steering will feel "heavy." If the rear tire goes flat, the back of the motorcycle will tend to jerk from side to side. If one of your tires suddenly loses air, react quickly to keep your balance by:

- holding the handlegrips firmly. Concentrate on steering a straight course opposite the tire that's flat.
- gradually applying the brake, slowing down, edge to the side of the road, and stop.

If you have a blowout, you need to react quickly to keep your balance. A front wheel blowout affects your steering and makes it feel heavy. A rear wheel blowout makes the back of the motorcycle slide from side to side.

If you have a blowout, you can help by:

- concentrating on steering a straight course,

- gradually closing the throttle and coasting, and
- edging toward the side of the road and stopping.

Stuck throttle

Sometimes when you try to close the throttle, you may find that it won't turn. If this happens when you are slowing for traffic ahead, or making a turn, you must react quickly to prevent an accident. Here is what to do:

- immediately operate the engine cutoff switch and pull the clutch. This disconnects the engine from the rear wheel and keeps you from speeding up. Once you pull the clutch, you must keep it in until stopped or the throttle is freed.
- rotate the throttle back and forth several times. If the throttle cable is stuck, this may free it.
- if you can't close the throttle, use the motor cut-off switch or the key to turn off the engine. If your motorcycle does not have a cut-off switch or the key is on the side of the cycle, stop, then turn off the engine.

After you have stopped, check the throttle cable carefully to find the source of the trouble. Make certain the throttle is working freely before you continue.

Wobble

At a fairly high speed, the front wheel can sometimes begin to wobble (shake from side to side). The only thing you can do in a wobble is to ride it out by:

- firmly gripping the handlebars. Don't try to fight the wobble.
- gradually closing the throttle. Let the motorcycle slow down. (Don't apply the brakes; it could make the wobble worse.)

Pull off the road as soon as you can. If you are carrying a heavy load, distribute it more evenly. If you are at a gas station or have a tire gauge, check your tire inflation. Other things that can cause a wobble are: a

bent or out of alignment wheel, poorly adjusted steering, an improperly mounted or designed windshield or fairing, loose wheel bearings, or loose spokes.

Off the road

If you have to leave the roadway to check the motorcycle (or just to rest for a while), here are two important things to do.

Check the roadside. Make sure the surface of the roadside is firm enough to ride on. If it is soft grass, loose sand, or if you are just not sure about it, slow way down before you turn onto it. Since drivers behind would not expect you to slow down, make sure to check your mirror and give a clear signal.

Pull well off the road. Get as far off the road as you can. A motorcycle by the side of the road can be very hard to spot. You don't want someone else pulling off at the same place you are.

Road hazards

Even a quick stop may not be enough to keep you from hitting something in your path. A piece of debris or a pothole might appear suddenly in your path as the car ahead passes over it. Or, the car ahead might stop suddenly. The only way to avoid a collision would be with a quick turn.

The trick to making a quick turn is to get the motorcycle to lean quickly in the direction you wish to turn. The sharper the turn, the more you must lean.

To get the motorcycle to lean quickly, press on the inside of the handgrip in the same direction you want to turn. If you wish to turn to the right, press on the inside of the right handgrip. This causes the front wheel to move slightly to the left as you and the motorcycle continue straight ahead. The result is a lean to the right.

You can demonstrate this to yourself. While riding in a straight line, press the inside of the right handlebar. You will notice the motorcycle

turn to the right. You should practice making quick turns so you'll be able to make them in an emergency.

This way of getting the motorcycle to lean also happens in normal turns. But most people don't notice it except on very sharp turns.

Stay in your own lane in an emergency. The moment you change lanes, you risk being hit by a car. You should be able to squeeze by most obstacles without leaving your lane. This is one time when the size of the motorcycle is in your favor. Even if the obstacle is a car, there is generally time to make sure there are no vehicles in the other lane.

Ride over objects

Sometimes you have no choice but to ride over some object in your path. A length of tailpipe may be too close to you for you to steer around it. Handling objects is a lot like riding over uneven surfaces. Here is what to do:

- hold onto the handgrips tightly to keep your grip when the front wheel hits.
- keep a straight course. This keeps the motorcycle upright and reduces the chance of falling on impact.
- rise slightly on the footpegs. This allows your legs and arms to absorb the shock and helps keep you from being bounced off as the rear wheel hits.

There are other ways of handling a motorcycle that let you climb over large obstacles; however, they require a lot of skill. The three steps above let you ride safely over most of the obstacles you would find on the highway. It is a good idea to check your tires for damage after riding over an object.

Flying objects

From time to time you can be struck by insects, cigarette butts thrown from car windows, or rocks kicked up by the tires of the vehicle ahead. If you are without face protection, you could be struck in the eye,

the face, or the mouth. If you are wearing face protection, it could become smeared or cracked, making it difficult to see. Whatever happens, don't let it affect your control of the motorcycle. Keep your eyes on the road and your hands on the handlebars. As soon as it is safe, pull off the road and repair the damage.

Animals

Naturally, you should do everything you can to avoid hitting a small animal. However, if you are in traffic, don't swerve out of your lane to avoid hitting an animal. You have a better chance to survive impact with an animal than you do a collision with a car.

Motorcycles tend to attract dogs. If you find yourself being chased, don't kick at the animal. It is too easy to lose control of the motorcycle. Instead, shift down and approach the animal slowly. As you reach it, speed up suddenly. You will leave the animal behind so quickly that it will generally lose interest.

Carry passengers and cargo

Before carrying a passenger or large loads, you should be well-acquainted with the operation of your motorcycle. The extra weight changes the way the motorcycle handles — the way it balances, the way it turns, the way it speeds up and the way it slows down.

Someone who weighs less than the operator is easier to carry than someone heavier.

Here are some guidelines to follow in carrying a passenger and cargo.

Passengers

In order to carry a passenger safely, you must do the following:

- check your motorcycle for adequate passenger-carrying equipment,
- instruct your passenger before you start out, and
- adjust your tires and shocks to the passenger's weight.

To carry a passenger, your motorcycle must have:

A proper seat. The seat must be large enough to hold both you and your passenger without crowding. You should not have to move any closer to the front of the motorcycle than you usually do. A passenger should not hang over the end of the seat.

Footpegs. The passenger must have a set of footpegs. Without a firm footing, your passenger can fall off and pull you off, too.

Protective equipment. A passenger must have the same type of protective equipment as the operator.

You should also adjust the mirror and headlight to the change in the motorcycle's angle. Have the passenger sit on the seat while you make the adjustments. If you carry the passenger, it is a good idea to add a few pounds of pressure to the tires (check your owner's manual). If the shock absorbers are adjustable, they should also be adjusted to carry the added weight.

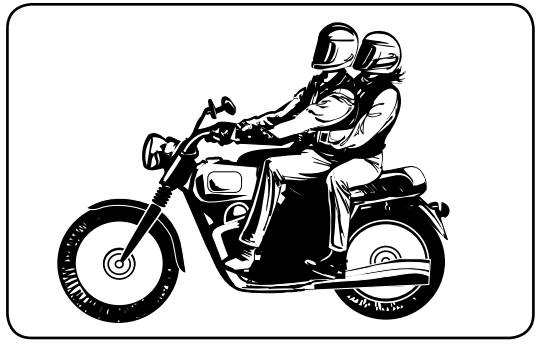
Instructing passengers

Don't assume the passenger knows what to do, even if he or she is a motorcycle rider. Provide complete instructions before you start.

A passenger should be told to:

- get on the motorcycle after the engine has started,
- sit as far forward as possible without crowding you,
- hold tightly to your waist, hips, or belt,
- keep both feet on the pegs at all times, even when the motorcycle is stopped,
- look over inside shoulder on turning,
- stay directly behind you, leaning as you lean, and
- avoid any unnecessary motion or talk.

Riding with a passenger



When you are carrying a passenger, the motorcycle responds more slowly. It takes longer to speed up, slow down, or make a turn. The heavier the passenger or the lighter the cycle, the longer all of these things take. To adjust for added weight of the passenger, you should:

- operate at a somewhat slower speed, particularly on corners, curves, or bumps,
- begin to slow down earlier than usual when you approach a stop,
- allow a greater following distance and keep more distance between yourself and cars to either side, and
- look for larger gaps whenever you cross, enter, or merge with traffic.

Warn your passenger when you are about to start moving, stop quickly, turn sharply, or ride over a bump. Otherwise, talk as little as

possible. In order to make yourself understood, you have to turn your head. Do it carefully because your eyes are now off the road.

Loads and cargo

A motorcycle is not really designed to carry cargo. However, small loads can be carried safely if they are properly positioned and fastened.

Keep the load low. Secure loads to the seat or put them in saddlebags. Do not pile loads against a sissy bar or frame on the back of the seat. This will change the center of gravity and disturb the balance of the motorcycle.

Keep the load forward. Place the load over or forward of the rear axle. Anything mounted behind the rear wheel can affect how the motorcycle turns and brakes. It can also cause a wobble.

Distribute the load evenly. If you have saddlebags, make certain the load in each one is about the same. An uneven load can cause the motorcycle to pull to one side.

Secure the load. Fasten the load securely with elastic cords or ropes. A loose load can catch in the wheel or chain. If this happens, the rear wheel may lock up and cause the motorcycle to skid.

Check the load. Check the load every so often, when you are stopped. Make sure it has not worked loose or moved.

Learn group riding

The highway is not a place to socialize. Motorcyclists riding in groups do not have any special rights. If you want to ride with others, do not endanger anyone or interfere with the flow of traffic.

Size

A large group interferes with traffic. It makes cars pass a long line of motorcycles at a time. Also, a large group tends to be separated easily by traffic or red lights. Those who are left behind often ride unsafely to catch up. If your group has more than four or five riders, divide it into two or more smaller groups.

Organization

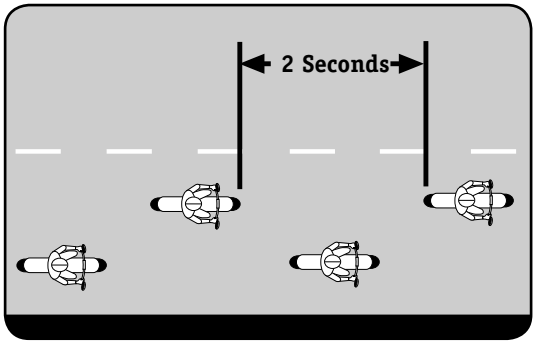
Keep the group together.

Planning ahead. If you are the leader, look ahead for changes. Give hand signals early so the word spreads among the riders in plenty of time. Start lane changes early enough to allow everyone to complete the change.

Putting beginners up front. Place inexperienced riders behind the leader, where they can be watched by more experienced riders.

Following those behind. Let the last in line set the pace. Use your mirror to keep an eye on the person behind you. If s/he falls behind, slow down some. If everyone does this, the group will stay with the tailender.

Knowing the route. Make sure everybody knows the route. Obey any special rules on a particular route. Then if someone is separated for a moment, s/he won't have to hurry in fear of taking a wrong turn.



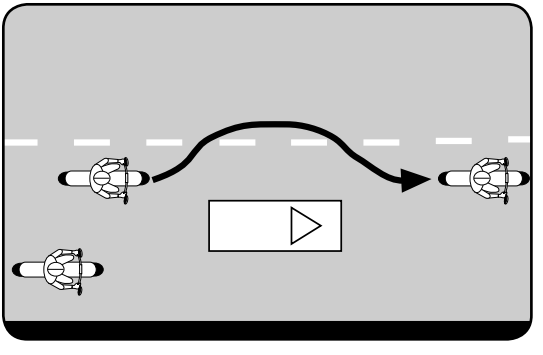
Distance

It is important to keep close ranks and a safe distance. A close group takes up less space on the

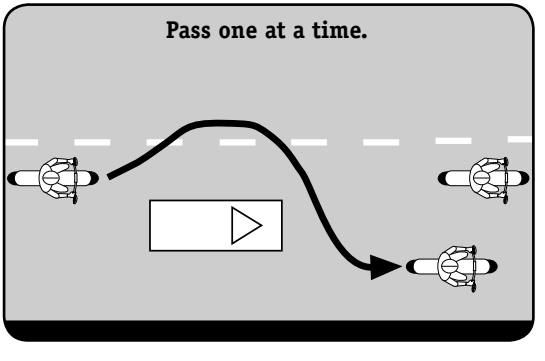
highway, is easier to see, and is less likely to be separated by traffic lights. However, it must be done properly.

Don't pair up. Never operate directly alongside another motorcycle. If you have to avoid a car or something in the road, you will have no place to go. If you have to say something to another rider, wait until you both have stopped.

Staggered formation. Keep close ranks and yet maintain an adequate distance through a "staggered" formation. The leader rides to the left side of the lane while the second rider stays a little behind and rides to the right side of the lane. A third rider would take the left position, a normal two second distance behind the first rider. A fourth rider would be a normal two second distance behind the second rider. This formation allows the group to close ranks without reducing following distance and without having riders drive along side one another.



Staggered formation can be safely used on an open highway. However, a single file should be resumed on curves, during turns, while entering or leaving a highway, when returning to a narrow roadway, or when topping the crest of a hill.



When riders in a staggered formation want to pass, they should do it one at a time. When it is safe to do so, the lead rider should pull out and pass. When the leader returns to the lane,

he or she should take the left lane position and keep going to open a gap for the next rider. As soon as the first rider is safely by, the second rider should move to the left position and watch for a safe chance to pass. After passing, this rider should return to the right lane position and open up a gap for the next rider.

Ride sober and awake

Riding a motorcycle is far more demanding that driving a car. You must be in good physical and mental shape to ride safely. Three things that often keep cyclists from being in shape to ride safely are alcohol, drugs, and fatigue.

Alcohol

Drinking and driving is extremely dangerous. Over half of highway deaths involve use of alcohol. Drinking and riding is far more dangerous. Riding a motorcycle requires a high degree of skill and judgment. It also requires a good sense of balance. Alcohol limits these skills.

It is dangerous to ride if you have been drinking. Alcohol affects your vision. You can't see things clearly and judge distance. It is hard enough to ride a motorcycle safely when your vision is normal.

The drinking problem is just as extensive among motorcyclists as it is among automobile drivers. However, motorcyclists are far more likely to be killed or severely injured in an accident. In 1998 nationwide, 49,000 motorcycle drivers and passengers were injured and 2,284 were killed. Of these fatalities, 936 motorcycle drivers tested positive to driving under the influence of alcohol. New Jersey motorcyclists had 31 fatal accidents in 1998, with 12 directly attributable to drinking and driving.

No one is immune to the effects of alcohol. No matter how much friends may brag about their ability to hold their liquor, alcohol makes them less able to think clearly and to perform physical tasks skillfully. Alcohol has extremely harmful effects on motorcycle operating skills. They begin long before you are legally intoxicated.

Drugs

Almost any drug can affect the skills that you need to ride a motorcycle safely. This includes prescription drugs as well as illegal drugs. It even includes such everyday drugs as cold tablets or allergy pills. Such drugs can leave you weak, dizzy, or drowsy. Make sure you know the effects of any drug before you attempt to ride.

If you begin to feel dizzy or weak while you are riding, stop and wait until you feel normal. If you must continue, slow down and keep more than the normal distance between you and other vehicles.

Fatigue

Riding a motorcycle is much more tiring than driving a car. If you plan a trip, bear in mind that you will tire more quickly than you would in a car, and the effects of fatigue upon your control of the vehicle will be much worse.

Here are some things you can do to prevent fatigue:

- protect yourself from the elements. Wind, cold, and rain make you tire quickly. Dress warmly. A windshield is worth its cost, if you plan to do a lot of traveling.
- limit your distance. Don't cover more than about 300 miles a day.
- take frequent rest breaks. Stop and get off the cycle.

Check your motorcycle

There are plenty of things on the highway that can cause you trouble. Your motorcycle should not be one of them. Three ways to be sure your motorcycle won't let you down are: 1. make sure you have the right equipment, 2. keep the bike in safe riding condition, and 3. avoid add-on accessories or modifications that make it harder to handle.

Model

The first thing is to make sure you have the right motorcycle. If you are a beginner, you may want to consider a smaller cycle — no more than 250cc — until you drive several hundred miles. Make sure the motorcycle fits you. Your feet should be able to reach the ground while you are sitting on the seat.

There are a few items of equipment that are necessary for safe operation. New Jersey requires that you keep the following items in good working order:

- headlight and taillight,
- front and rear brakes,
- turn signals,
- horn, and
- at least one rearview mirror.

These are just minimum requirements. To survive in traffic, you should have a mirror on each side of the handlebars. It is also a good idea to have reflectors on the side of the motorcycle.

Service

The motorcycle needs more frequent attention than a car. With a car, you can usually wait until something goes wrong and then fix it. When something goes wrong with the motorcycle, it may cause an accident.

There is only one way to spot problems before they cause trouble. Inspect the motorcycle carefully and fix things right away. The first chapter of this manual described checks that should be made each time you ride. Here are some things to check once each week:

Tires. Check the tread for the amount and kind of wear. If the wear is uneven, have the wheels balanced and the alignment checked. Many blowouts are due to low air pressure. Also, check for cuts and scrapes that could lead to a blowout.

Wheels. Check both wheels for missing or loose spokes. Check the rims for cracks or dents. Lift the wheel off the ground and spin it. Watch its motion and listen for noise. Also move it from side to side to check for looseness.

Controls. Check the controls for smooth operation. Check the cables for kinks or broken strands. Lubricate the control mechanisms at each end of the cable.

Chains and sprockets. Oil the chain. Check the sprockets for worn teeth.

Shock absorbers. Does your motorcycle bounce several times after it crosses a bump? If you hear a clunk, your shock absorbers may need to be adjusted or replaced. Check your shocks for oil/leaks.

Fastenings. Check for loose or missing nuts, bolts, or cotter pins. If you keep the motorcycle clean, it is easier to spot missing parts.

Brakes. Adjust the brakes so that they lock the wheel when fully applied. If you can't get the wheel to lock, or if you hear a scraping sound when you try to stop, have the linings checked.

Accessories and modifications

A safe motorcycle can be quickly turned into a menace. If you add the wrong accessories or make changes in the motorcycle, it can make the motorcycle much harder to handle. Here are a few things to avoid:

Highway pegs: pegs mounted on the front of the motorcycle to allow the rider to lean back.

The problem is the operator:

- takes too long to reach the foot brake in an emergency, and
- doesn't have the footing needed to maintain balance.

Sissy bars: a high bar or frame mounted on the back of the seat.

The problem is they:

- change the motorcycle's center of gravity and affect its balance when loaded.
- prevent the operator and passenger from getting off the motorcycle in a hurry.

Extended handlebars: high handlebars that extend above the operator's shoulders.

The problem is they:

- are illegal in New Jersey,
- put stress on handlebar mounts, and
- cause blocked vision.

MVS facilities

For routine motor vehicle titles, registrations and licenses, go to one of these Agencies:

Bakers Basin
Bayonne
Bridgeton
Burlington
Camden
Cardiff
Cherry Hill
East Brunswick
East Orange
Eatontown RSC
Edison
Elizabeth
Englewood
Flemington
Freehold
Haddon Heights
Irvington
Jersey City
Lakewood
Lodi
Manahawkin
Matawan
Medford
Morristown
Newark
Newton
North Bergen
Oakland
Rahway
Randolph
Rio Grande
Salem
Somerville
South Plainfield
Springfield
Toms River
Trenton RSC
Vineland
Wallington
Washington
Wayne—Route 46
Wayne RSC
West Deptford RSC
Williamstown
Wyckoff

For written and/or vision tests and road test appointments, go to a Driver Testing Center located at these Agencies:

Bakers Basin
Bridgeton
Burlington
Camden
Cardiff
Cherry Hill
East Brunswick
Eatontown RSC
Edison
Elizabeth
Freehold
Jersey City
Lodi
Matawan
Newark
Newton
North Bergen
Oakland
Rahway
Rio Grande
Salem
South Plainfield
Springfield
Toms River
Trenton RSC
Vineland
Washington
Wayne—Route 46
Wayne RSC
West Deptford RSC

and these Armories:
Dover
Flemington

For motorcycle road tests, one of these facilities:

Bakers Basin*
Cherry Hill IS
Eatontown RSC*
Lodi*
Mays Landing IS
Miller Air Park
Rahway*
Randolph IS
Salem IS
Wayne—Route 46*

For vehicle inspection, go to one of these inspection station:

Asbury Park
Bakers Basin
Bridgeton
Cape May Court House
Cherry Hill
Delanco
Deptford
Eatontown RSC
Flemington
Freehold
Jersey City
Kilmer
Lakewood
Lodi
Manahawkin
Mays Landing
Millville
Montclair
Morristown
Newark
Newton
Paramus
Plainfield
Rahway
Randolph
Ridgewood
Salem
Secaucus
South Brunswick
Southampton
Washington
Wayne—Route 46
Westfield
Winslow

NOTE: Appointment only Inspection Stations include:

- Specialty Inspection Stations at Asbury Park, Morristown and Winslow. Site employees will inspect salvage, reconstructed and raised vehicles, farm labor transports, handicapped, summer camp buses, specially constructed cars, trucks and motorcycles and referee inspection disputes; no regular inspections are performed.
- Appointment only sites include Bridgeton, Cape May, Montclair, Ridgewood, Salem, Washington and Westfield.

For more information, motorists should call (888) NJMOTOR.

*** Also for 3-wheel bike road tests. Driver will have a 3-wheel restriction on license.**
Legend: RSC (Regional Service Center), IS (Inspection Station)

24-Hour Telephone Information and Assistance

General Customer Information
(888) 486-3339
toll free in New Jersey

(609) 292-6500
out of state

For License Suspensions and Restorations
(609) 292-7500

Customer service representatives are available from
8:30 a.m. to 4:30 p.m.
Monday through Friday*

For information on the TDD communication system, look in the blue pages of your telephone directory under Motor Vehicle Services.

*Detailed recorded information is available
after those hours, seven days a week, including holidays.